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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Ralf Henne

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EXAMINER

KAPLAN, HAL IRA

ART UNIT

PAPER NUMBER

2836

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/523,309	Applicant(s) HENNE ET AL.	
	Examiner Hal I. Kaplan	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 10, 2008 has been entered.

Claim Objections

2. Claims 17, 19, and 22 are objected to because of the following informalities: Claim 17, line 7, "form" should be "from". Claim 19, line 14, "form" should be "from". Claim 22, line 8, "form" should be "from". Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
6. Claims 9, 10, 16, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the German patent of Berberich et al. (198 29 730) in view of the US patent of Li et al. (6,646,500).

As to claim 9, Berberich discloses a control unit in a vehicle, comprising: a converter (12c,2b",2b',13a) having an electrical isolation (2b",2b') from a main electrical system (3), wherein the converter (2b",2b') is configured for supplying an electrically isolated supply voltage and an electrically isolated internal ground to at least one component; and at least one coupling element (2a",2a') having an electrical isolation from the main electrical system (3), the coupling element (2a",2a') being used for data transmission (to modem 7) (see Figure 1; ground assigned to component 1 is near terminal 13). An English translation of Berberich is included as an attachment to this Office action. Berberich does not disclose the supply of power and transmission of data to the same integrated circuit.

Li discloses an integrated circuit for a vehicle, configured to receive data signals via a demodulator (20) (see column 2, lines 5-7, 14-17, and 28-35; column 4, lines 41-50; and Figures 1-2). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have used the system of Berberich to supply power and transmit data signals to the integrated circuit of Li, in order to protect the integrated circuit from faults in the power supply.

As to claim 10, the converter (12c, 2b", 2b', 13a) of Berberich includes a transformer (2b",2b') for electrical isolation, a DC/AC voltage converter (12c) being provided on a primary side, and a rectifier (13a) being provided on a secondary side (see Figure 1).

As to claim 16, Berberich discloses supplying power to electronics of the control unit (see Figure 1).

As to claims 18 and 21, the converter (12c, 2b", 2b', 13a) of Berberich is configured to generate the supply voltage based on the vehicle battery voltage (U). Berberich does not specify the vehicle battery voltage (U) being generated in response to a closing of an ignition lock switch, but one of ordinary skill in the art would readily know to start a vehicle's battery by closing an ignition lock switch via a key.

7. Claims 9, 10, and 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berberich in view of the US patent of Regazzi et al. (5,844,469).

As to claim 9, Berberich discloses a control unit in a vehicle, comprising: a converter (12c,2b",2b',13a) having an electrical isolation (2b",2b') from a main electrical system (3), wherein the converter (2b",2b') is configured for supplying an electrically

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isolated supply voltage and an electrically isolated internal ground to at least one component; and at least one coupling element (2a",2a') having an electrical isolation from the main electrical system (3), the coupling element (2a",2a') being used for data transmission (to modem 7) (see Figure 1; ground assigned to component 1 is near terminal 13). Berberich does not disclose the supply of power and transmission of data to the same integrated circuit.

Regazzi discloses an integrated circuit (21) for a vehicle, configured to receive power (from power supply 23) and data (I1) signals (see column 3, lines 31-42 and Figure 2). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have used the converter and coupling element of Berberich to supply power and transmit data signals to the integrated circuit of Regazzi, in order to protect the integrated circuit from faults in the power supply.

As to claim 10, the converter (12c, 2b", 2b', 13a) of Berberich includes a transformer (2b",2b') for electrical isolation, a DC/AC voltage converter (12c) being provided on a primary side, and a rectifier (13a) being provided on a secondary side (see Figure 1).

As to claim 16, Berberich discloses supplying power to electronics of the control unit (see Figure 1).

As to claims 17, 19, and 22, Regazzi discloses an electronics component (22) configured to receive a second supply voltage; and a coupling component (represented by signals I1 and U3) configured to exchange data between the integrated circuit (21) and the electronics component (22) (see column 3, lines 37-42 and column 6, lines 35-

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37). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have used a second converter as taught by Berberich to supply power to the electronics component of Regazzi, in order to protect the electronics component from faults in the power supply or main electrical system of the vehicle.

As to claims 18, 20, and 21, the converter (12c, 2b", 2b', 13a) of Berberich is configured to generate the supply voltage based on the vehicle battery voltage (U). Berberich does not specify the vehicle battery voltage (U) being generated in response to a closing of an ignition lock switch, but one of ordinary skill in the art would readily know to start a vehicle's battery by closing an ignition lock switch via a key.

8. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berberich in view of Li as applied to claim 10 above, and further in view of the US patent of Seki et al. (4,667,283).

As to claim 11, Berberich in view of Li disclose all of the claimed features, as set forth above, except for the claimed oscillator. Seki discloses a DC/AC voltage converter (13,34,45) including an oscillator (456,457) (see column 3, lines 46-47; column 4, lines 45-50; and Figures 2 and 3). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have used the DC/AC converter of Seki in the circuit of Berberich in view of Li, because the DC/AC converter of Seki is efficient and has a good response characteristic because the efficiency can be improved by lowering the chopper frequency in the event of light-load operation.

As to claim 12, the DC/AC voltage converter of Seki includes a chopper (11) (see column 3, lines 46-47; column 4, lines 4-6; and Figure 2).

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9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berberich in view of Li as applied to claim 9 above, and further in view of the US patent of Has (6,650,030).

As to claim 13, Berberich in view of Li disclose all of the claimed features, as set forth above, except for the claimed optocoupler. Has discloses an optocoupler (21) which is used to supply power from a power supply (L,N) to a component (1). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have used an optocoupler in the circuit of Berberich in view of Li, in order to minimize power draw from the data network during switching (see column 2, lines 61-64).

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berberich in view of Li as applied to claim 9 above, and further in view of the US patent of Young et al. (7,061,139).

As to claim 14, Berberich in view of Li disclose all of the claimed features, as set forth above, except for the claimed energy store. Young discloses an energy store (74) which runs a converter (64) in case a power supply (10,10" or 60) is disconnected (see column 11, lines 3-24). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have used an energy store in the circuit of Berberich, in order to allow the circuit to continue to run in the event of an interruption in the main power supply.

11. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berberich in view of Li as applied to claim 9 above, and further in view of the US patent of Belau et al. (5,725,242).

As to claim 15, Berberich in view of Li disclose all of the claimed features, as set forth above, except for the claimed ignition circuit. Belau discloses an ignition circuit (squib) control for a restraint device (airbag) in a vehicle (see column 2, lines 48-66). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have used the circuit of Berberich with an integrated circuit including an ignition circuit control for a restraint device in order to provide fault-resistant power and data transmission to the restraint device.

Response to Arguments

12. Applicant's arguments, see Remarks, filed July 10, 2008, with respect to the objections to the specification have been fully considered and are persuasive. The objection has been withdrawn.

13. Applicant's arguments, see Remarks, filed July 10, 2008, with respect to the rejection(s) of claim(s) 9, 10, and 16 under 35 U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Li and Regazzi.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal I. Kaplan whose telephone number is 571-272-8587. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Sherry/
Supervisory Patent Examiner, Art Unit 2836

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